



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,479	08/28/2003	Martin R. Elliott	7096/SYNX/JB	6122
41161	7590	10/09/2007		
DUGAN & DUGAN, PC 55 SOUTH BROADWAY TARRYTOWN, NY 10591			EXAMINER LOWE, MICHAEL S	
			ART UNIT	PAPER NUMBER
			3652	
			MAIL DATE	DELIVERY MODE
			10/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/650,479

Applicant(s)

ELLIOTT ET AL.

Examiner

M. Scott Lowe

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

This application contains claims 8-18 drawn to an invention nonelected with traverse in the reply filed on 2/2/07. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 19-20 are rejected on the ground of nonstatutory double patenting over claims 1-90 of copending Application No. 10/650,480 (patent 7,243,003) and also over claims 1-34 of copending Application No. 10/650,310 (patent 7,234,584) since the

Art Unit: 3652

claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, including a plurality of load ports, a carrier handler disengaging a carrier while it is in motion on a transport device.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7,19,20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 1,19,20 applicant states that the substrate carriers are not stored and there is no local storage. This does not appear to be technically correct as the carriers are "stored" on whatever is moving them while they are transported and likewise there is

Art Unit: 3652

local "storage" at any point the carriers are handled. For sake of examination the claims are interpreted in the claims as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,5,6,19-20 are rejected under 35 U.S.C. 103(a) as obvious over Garric (US 5,382,127) in view of Rochet (US 4,805,759).

Re claims 1,19 Garric teaches a method of supplying substrates 138 to a processing tool (503,etc.), comprising:

providing a plurality of load ports 200 (closest number) (without local storage) each having a mechanism adapted to open a substrate carrier 100;

providing a factory exchange location 401A,B,C (closest numbers) (without local storage) at which substrate carriers 100 are exchanged with a substrate carrier transport device 401 while the substrate carriers 100 are in motion and being transported by the substrate carrier transport device 401;

providing a carrier handler (not numbered, column 36, lines 54+) having an end effector (not numbered) adapted to contact a substrate carrier 100 and disengage the substrate

Art Unit: 3652

carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate carrier transport device; receiving a first plurality of substrate carriers 100 at the factory exchange location from the substrate carrier transport device 401; and for each the first plurality substrate carriers: transporting the substrate carrier 100 from the factory exchange location directly to a respective one of the plurality of load ports (without storing the substrate carrier); docking and opening the substrate carrier at the respective load port; undocking and closing the substrate carrier at the respective load port; transporting the substrate carrier 100 from the respective load port directly to the factory exchange location (without storing the substrate carrier); and returning the substrate carrier to the substrate carrier transport device while the substrate carriers transport device is in motion.

Garic (column 22) infers but does not explicitly state that the carrier handler end effector disengages the substrate carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 100 is returned to it. For sake of completeness the following obvious rejection is provided:

Rochet teaches a carrier handler end effector 44 disengages the substrate carrier 36 from the substrate carrier transport device 14 while the substrate carrier 36 is in motion and being transported by the substrate carrier transport device and the substrate carrier

Art Unit: 3652

transport device is in motion when the carrier 36 is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Rochet to have the carrier handler end effector disengages the substrate carrier from the substrate carrier transport device while the substrate carrier is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting.

Re claims 2, Garric teaches the substrate carriers 100 are single substrate carriers.

Re claims 5, Garric teaches the docking of each substrate carrier 100 occurs simultaneously with opening of the respective substrate carrier.

Re claims 6, Garric teaches the factory exchange location and the load ports have substantially the same footprint.

Re claim 20, Garric teaches an apparatus adapted to supply substrates to a processing tool (503,etc.), comprising:

a substrate carrier handler (401 or unnumbered, column 36, lines 54+) adapted to transport a substrate carrier 100 to a first load port 200 (closest number) of the processing tool, the substrate carrier handler including:

a vertical guide (the base, floor, etc.);

a horizontal guide (the base, floor, etc.) coupled to the vertical guide; and

Art Unit: 3652

an end effector (not numbered) adapted to support the substrate carrier 100 and to move vertically relative to the vertical guide and horizontally relative to the horizontal guide; and

transporting the substrate carrier from the substrate carrier conveyor directly to the first load port (without storing the substrate carrier);

docking and opening the substrate carrier at the first load port;

undocking and closing the substrate carrier at the first load port; and returning the substrate carrier directly to the substrate carrier conveyor (without storing the substrate carrier).

Garric (column 22) infers but does not explicitly state that the carrier handler end effector disengages the substrate carrier 100 from the substrate carrier transport device 401 while the substrate carrier 100 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 100 is returned to it. For sake of completeness the following obvious rejection is provided:

Rochet teaches a carrier handler end effector 44 disengages the substrate carrier 36 from the substrate carrier transport device 14 while the substrate carrier 36 is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier 36 is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Rochet to have

Art Unit: 3652

the carrier handler end effector disengages the substrate carrier from the substrate carrier transport device while the substrate carrier is in motion and being transported by the substrate carrier transport device and the substrate carrier transport device is in motion when the carrier is returned to it in order to increase throughput and decrease friction pollution by avoiding unnecessary stopping and starting.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759), and further in view of Matsumoto (US 6,517,304).

Re claim 3, Garric teaches groups of two load ports, but does not teach stacking the load ports. Matsumoto teaches stacking load ports 31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Matsumoto to stack load ports in order to save space.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759) and Matsumoto (US 6,517,304), and further in view of Asakawa (JP 10256346).

Re claim 4, Garric teaches (not numbered, column 36, lines 54+) that the carrier handler may be any type of device (and thus type of movement). Asakawa teaches placing a carrier handler 14,15 between load ports and in order to reduce footprint and increase efficiency (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching

Art Unit: 3652

of Asakawa to have the carrier handler move the substrate carriers only within an envelope defined by footprints of the two stacks of load ports in order to promote efficiency and reduce the footprint.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garric (US 5,382,127) in view of Rochet (US 4,805,759) and further in view of Kimura (US 6,439,822).

Re claim 7, Garric does not teach the factory exchange location is at a height greater than respective heights of all of the load ports. Kimura teaches that having the substrate carrier transport device 51 at a height greater than respective heights of all of the load ports creates a more efficient layout saving space and money (column 8, lines 2-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Garric by the general teaching of Kimura to have the substrate carrier transport device 401 (and thus the factory exchange location) at a height greater than respective heights of all of the load ports creates a more efficient layout saving space and money.

Conclusion

Applicant's arguments filed 7/13/07 have been fully considered but they are not persuasive.

Applicant argued that Garric does not teach the amended claims because item 300 uses local storage. Garric does not require use of 300 as stated in column 21, lines

Art Unit: 3652


10-19 and states that idles times where 300 stores containers may or may not occur. Also, the rejection does not rely on just 300 (401A) but instead lists 200 (401B,401C) as the load ports which with or without Rochet, to not require local storage. Rochet is used to make sure it is clear that the prior art teaches for the carrier to be kept in motion without local storage in order to increase throughput, etc.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is (571) 272-6929. The examiner can normally be reached on 6:30am-4:30pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on (571)272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

msl 9/25/07
msl


Peter M. Cuomo
Supervisory Patent Examiner
Technology Center 3600

Application/Control Number: 10/650,479

Art Unit: 3652

Page 11